SECTION VI. WEATHER AND DATA FOR THE MONTH.

THE WEATHER OF THE MONTH.

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Pressure.—The distribution of the mean atmospheric pressure over the United States and Canada, and the prevailing direction of the winds, are graphically shown on Chart VII, while the average values for the month at the several stations, with the departures from the normal, are shown in Tables I and III.

For the month as a whole barometric pressure was low over nearly all portions of the country, but especially so in the northern districts from the Lake region westward to the Pacific, and over the Canadian Northwest. The only portion of the country where the pressure averaged above normal was in the southern Rocky Mountain and southern Plateau regions, where comparatively high pressure continued during much of the first half of the month. Pressure was unusually high over the northeastern districts about the 14th, and again from the 27th to 29th, but otherwise it was not unusually high at any time during the month, nor was it especially low, except about the 3d and 4th along the Atlantic Coast, again about the 9th and 12th over the Lake region and New England, and about the 21st and 25th in New England, the month closing with low pressure and a storm of considerable severity over the upper Ohio Valley and Lower Lake region.

The distribution of the highs and lows was very generally favorable for the occurrence of southerly winds at frequent intervals over much of the country, and they were the prevalent winds during the month to westward of the Rocky Mountains, as well as over the middle Plains region, Ohio Valley, and to the southward.

Temperature.—The month opened with temperatures moderately low in southern districts, while decidedly cold weather was prevalent in northern New York and in New England, where temperatures were from 10° to 20° below zero. At the same time temperatures above the average prevailed in the Rocky Mountain region and the Northwest. During the following few days unseasonably warm weather overspread the eastern districts, while in its wake temperature conditions returned to about normal, with moderately cold weather in southern districts and frosts over much of Florida. Warmer weather followed, and by the end of the first decade it had extended to all eastern districts.

At the beginning of the second decade colder weather advanced from the Northwest, the fall in temperature being quite marked from the 11th to 12th in the upper Mississippi and middle Missouri valleys. By the 13th the cold area had advanced to New York and New England, with minimum temperatures as much as 20° below zero, and during the following day the line of zero temperature had extended to southern New Jersey and southeastern Pennsylvania, with a still further fall to 30° below in northern New York. During the passage of this cold area over northern districts moderate weather continued in southern districts, and temperature rose to near normal in the central and western sections. By the 15th the cold wave over the northeast had moved into the Atlantic, and temperatures near or above the seasonal average prevailed during the remainder of the month over nearly all districts, the last decade being especially warm over the central and eastern districts, except that near the end of the month colder weather had overspread portions of the northern sections.

The month as a whole was among the warmest of its name in the past 40 years, the average temperature exceeding the normal in all portions, save in northern New York and portions of New England, and over extreme southern Florida, where the averages were slightly below normal. Over the interior portions of the country and in the far northwest the excess ranged from 9° to 12° per day, and in some portions of the above-named regions the persistence of uniformly warm weather was without parallel in any previous January of record. January was the third consecutive month with temperatures abnormally high over practically all portions of the country to eastward of the Rocky Mountains, while two of the months had temperatures in excess of the normal to the westward.

The line of freezing temperature for January scarcely reached the Gulf coast, while zero temperatures were not recorded in the central districts south of northern Nebraska, northern Iowa, and southern Wisconsin. No unusual extremes of temperature occurred, although near the first of the month maximum temperatures were as high as previously reported in January at a few points in the far Northwest, and also near the close at a few points in the Middle Atlantic States.

Precipitation.—The geographical distribution of the precipitation during the month is illustrated on Chart V, the notable features of which are the heavy falls over the Pacific coast States, especially in southern California, and in portions of the western slopes of the Rocky Mountains in Colorado and adjoining States.

The precipitation along the eastern slope of the Rocky Mountains and over the western portions of the Great Plains region was exceedingly light, but to the eastward there was a very general increase, the monthly totals near the Atlantic Coast averaging from 2 to 4 inches or slightly more. The amounts, however, were generally less than the average, the deficiencies being especially marked in the Gulf States and portions of the Ohio and middle Mississippi Valleys. To the westward of the Rocky Mountains the precipitation was generally above the normal, the excess amounting to 10 inches or more at points along the immediate coasts of southern California, northwestern Oregon, and southwestern Washington.

Snowfall.—Some heavy falls of snow occurred in the lower Lake region and in portions of the Appalachian Mountain districts, but elsewhere to eastward of the Rocky Mountains the amounts as a rule were unusually light for a midwinter month. In the far western mountains, heavy falls appear to have occurred in portions of California, Utah, and Oregon, and moderate amounts were rather general on the western slopes of the Rockies. The supply of snow in the mountains appears ample for irrigation and other purposes in California, portions of Utah and Colorado, and portions of the States farther

north. In Arizona and New Mexico, however, the stored supply of snow appears inadequate.

GENERAL SUMMARY.

The continuation for the third consecutive month of unusually high temperatures over nearly all the districts from the Rocky Mountains eastward, the general absence of any appreciable snowfall over much of the great wheat-growing area, the deficiency in precipitation over the Gulf States, and the excess in the far West were the important features of the weather for the month of January, 1914.

The large number of warm, sunny days in the interior and southern portions of the country and the general absence of frost in the ground permitted of almost uninterrupted outdoor work, while the absence of any appreciable snow covering permitted the continued grazing of stock in many localities. The heavy rains and snows in California and portions of adjoining States have been very beneficial, and the outlook for the next season's water supply has been greatly improved.

Average accumulated departures for January, 1914.

Districts.	Temperature.			Precipitation.			Cloudiness.		Relative humidity.	
	General means for the current month.	Departures for the current month.	Accumulated departures since Jan. 1.	General means for the current month.	Departures for the current month.	Accumulated departures since Jan. 1.	General means for the current month.	Departure from the normal.	General means for the current month.	Departure from the normal.
							Per ct.	*Per ct.*	*Per ct.*	*Per ct.*
New England	24.4	− 0.1		3.14	−0.30		71	+12	77	+ 1
Middle Atlantic	34.7	+ 3.4		3.26	0.00		65	+ 7	75	− 1
South Atlantic	48.7	+ 3.7		2.43	−1.50		46	− 7	72	− 5
Florida Peninsula	59.8	− 0.2		3.60	+0.90		50	+ 2	80	− 1
East Gulf	50.5	+ 3.1		1.91	−3.10		44	−13	72	− 6
West Gulf	52.5	+ 6.3		0.72	−2.20		41	−12	68	− 8
Ohio Valley and Tennessee	38.4	+ 5.2		2.24	−1.60		72	+ 8	77	0
Lower Lakes	27.7	+ 3.4		2.65	0.00		81	+ 7	82	+ 1
Upper Lakes	24.3	+ 6.1		2.39	0.40		88	+19	84	+ 1
North Dakota	14.8	+ 9.8		0.64	0.00		62	+13	82	+ 2
Upper Mississippi Valley	31.1	+ 9.6		1.28	−0.50		74	+20	80	+ 2
Missouri Valley	31.8	+10.7		0.50	−0.60		56	+ 6	76	+ 1
Northern slope	28.3	+ 9.3		0.49	−0.40		61	+10	68	− 2
Middle slope	39.2	+10.1		0.10	−0.60		40	− 1	64	− 3
Southern slope	48.5	+ 8.3		0.04	−0.90		34	−10	54	−12
Southern Plateau	45.2	+ 3.4		0.59	−0.30		41	+ 7	59	+ 9
Middle Plateau	28.8	+ 4.7		2.52	+1.40		61	+10	75	+ 5
Northern Plateau	35.7	+ 8.6		2.22	+0.50		80	+13	69	−11
North Pacific	43.5	+ 4.0		12.64	+5.90		89	+14	88	+ 3
Middle Pacific	48.8	+ 1.5		8.16	+3.50		65	+ 9	84	+ 3
South Pacific	53.9	+ 3.0		8.48	+5.70		60	+15	75	+ 3

Maximum wind velocities during January, 1914.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Block Island, R. I.	3	60	ne.	Buffalo, N. Y.	12	74	sw.
Do	4	60	ne.	Do	23	50	sw.
Do	10	55	w.	Do	27	52	sw.
Do	12	67	w.	Do	29	54	sw.
Do	13	80	nw.	Do	31	92	sw.
Do	21	60	nw.	Burlington, Vt.	27	52	s.
Do	22	60	nw.	Do	29	50	s.
Boston, Mass.	12	51	nw.	Canton, N. Y.	31	53	sw.
Buffalo, N. Y.	6	56	sw.	Cheyenne, Wyo.	1	50	w.
Do	11	64	sw.	Do	6	50	w.

Maximum wind velocities during January, 1914—Continued.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Cheyenne, Wyo.	10	50	w.	North Head, Wash.	6	80	se.
Do	13	52	w.	Do	10	64	se.
Do	15	52	w.	Do	15	80	se.
Do	21	52	w.	Do	16	62	se.
Do	22	52	w.	Do	17	92	se.
Do	23	50	w.	Do	18	60	s.
Do	24	62	w.	Do	21	56	sw.
Do	25	70	w.	Do	22	50	sw.
Do	29	50	w.	Do	25	88	s.
Cleveland, Ohio	12	60	w.	Do	26	72	s.
Columbus, Ohio	12	52	nw.	Do	27	60	nw.
El Paso, Tex.	28	50	sw.	Do	29	68	s.
Eureka, Cal.	11	50	sc.	Pittsburgh, Pa.	12	50	nw.
Do	25	59	sw.	Do	31	51	sw.
Grand Haven, Mich.	11	50	nw.	Point Reyes Light,			
Helena, Mont.	1	62	sw.	Cal.	1	66	s.
Independence, Cal.	25	50	sw.	Do	2	68	s.
Lander, Wyo.	25	54	sw.	Do	8	69	nw.
Modena, Utah	25	54	s.	Do	11	53	s.
Do	26	52	sw.	Do	12	67	s.
Mount Tamalpais, Cal	2	52	sw.	Do	13	65	s.
Do	8	50	nw.	Do	14	64	s.
Do	17	57	sw.	Do	16	84	s.
Do	18	50	sw.	Do	17	66	s.
Do	21	52	s.	Do	18	51	s.
Do	24	53	sw.	Do	21	56	s.
Do	25	66	sw.	Do	23	64	s.
Do	27	60	nw.	Do	24	70	s.
Do	28	70	nw.	Do	25	62	sw.
Mount Weather, Va.	3	58	e.	Do	27	64	nw.
Do	7	56	nw.	Providence, R. I.	10	62	nw.
Do	10	66	nw.	Do	12	74	nw.
Do	11	54	nw.	Do	13	64	nw.
Do	12	72	nw.	Do	25	50	nw.
Do	17	60	nw.	Richmond, Va.	31	52	sw.
Do	18	54	nw.	St. Paul, Minn.	11	51	nw.
Do	21	66	nw.	Seattle, Wash.	7	52	s.
Do	24	56	nw.	Do	26	57	sw.
Do	25	52	nw.	Sheridan, Wyo.	1	52	nw.
Nantucket, Mass.	1	54	ne.	Sioux City, Iowa.	28	52	nw.
Do	4	59	ne.	Tatoosh Island,			
Do	12	50	w.	Wash.	1	88	se.
Do	13	55	w.	Do	2	84	s.
New York, N. Y.	10	69	nw.	Do	3	64	s.
Do	12	76	nw.	Do	4	72	s.
Do	13	71	nw.	Do	5	62	s.
Do	18	52	nw.	Do	16	52	s.
Do	21	62	nw.	Do	17	50	e.
Do	24	56	s.	Do	18	66	sw.
Do	25	64	nw.	Do	19	50	sw.
Do	31	52	s.	Do	25	60	s.
Norfolk, Va.	12	52	w.	Do	26	52	sw.
Do	21	50	w.	Do	27	50	w.
Do	25	51	w.	Do	29	70	s.
Do	31	50	sw.	Do	31	52	w.
North Head, Wash.	1	52	s.	Tonopah, Nev.	17	50	se.
Do	2	80	se.	Trenton, N. J.	3	56	ne.
Do	3	72	se.	Do	12	60	w.
Do	4	76	se.	Valentine, Nebr.	1	50	nw.
Do	5	78	se.				

MEAN LAKE LEVELS DURING JANUARY, 1914.

The following data are as reported monthly by the United States Lake Survey:

	Lake Superior.	Lakes Michigan and Huron.	Lake Erie.	Lake Ontario.
	Feet.	*Feet.*	*Feet.*	*Feet.*
Mean level during January, 1914:				
Above mean sea level at New York	602.38	580.09	572.06	245.60
Above or below—				
Mean stage of December, 1913	−0.36	−0.26	−0.08	−0.31
Mean stage of January, 1913	+0.49	0	−0.17	−0.91
Average stage for January, last 10 years	+0.34	+0.03	+0.32	+0.01
Highest recorded stage	−0.40	−2.58	−1.49	−2.00
Lowest recorded stage	+1.50	+1.01	+1.10	+1.80
Probable change during February	−0.2	0	−0.1	+0.1